Applied Information Technology Department
Course Syllabus
IT 101 Introduction to Information Technology

Catalog Description
Introduces students to the fundamental concepts in information technology (IT) that provide the technical underpinning for state-of-the-art applications. A perspective on the range of information technology is presented. Historical development and social implications of efforts in information technology form an integral part of the course.

Prerequisites
There are currently no prerequisites for this course.

Rationale
Information technology literacy has become a fundamental requirement for any major. An understanding of the principles underlying digital devices, computer hardware, software, telecommunications, networking and multimedia is an integral part of any IT curriculum. This course provides a sound foundation on the basic theoretical and practical principles behind these technologies and discusses up to date issues surrounding them including social aspects and how they impact everyday life.

Educational Objective
This course has been especially designed to target audiences from multiple disciplines. Students will gain literacy in the underlying principles and vocabulary of Information Technology. The course has three objectives: 1) to explain mathematical principles underlying multimedia information technologies, 2) to provide questions about the social, economic, and political contexts in which IT exists, and 3) to introduce cutting-edge technologies and trends such as those in the areas of wireless multimedia, computer security, digital audio, and high-performance computing.
Major Topics

On successful completion of this course, students will be able to:

- Gain familiarity with the foundations of basic information technologies.
- Be acquainted with topics regarding latest IT developments.
- Gain exposure to the social, political and economic implications of IT.
- Perform calculations involving basic IT concepts.
- Understand the difference between analog and digital technologies.
- Understand the hardware infrastructure of computers.
- Gain familiarity with the nature and different types of software.
- Understand how audio and images are digitized.
- Get acquainted with the different types of communication systems and transmission media.
- Understand the fundamentals of optical communication systems.
- Gain familiarity with the technologies behind wireless communications.
- Understand the basics of LAN and WAN technology.
- Learn about the crucial communication protocols used in IT systems.
- Gain exposure to the fundamental architecture and operating principles of the Internet.
- Get acquainted with various security issues and measures taken to ensure secure networks and communication systems.
- Understand the operating principles of landline telephony, cellular telephony and VoIP systems.
- Gain insight into the IT trends and the future of technologies
- Work with teams to discuss IT concepts and arrive at a consensus.
- Write about technology and produce ideas about the impact of technologies.

Textbook

**REQUIRED**

Information Technology in Theory
By: Pelin Aksoy and Laura DeNardis

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